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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/754,030 | 01/08/2004 | Jong-Kwon Kim | 5000-1-493 | 6085 |
| 33942 | 7590 | 10/10/2006 | EXAMINER | |
| CHA & REITER, LLC 210 ROUTE 4 EAST STE 103 PARAMUS, NJ 07652 | | | TRAN, DZUNG D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2613 | |

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/754,030 | | KIM ET AL. | |
| | Examiner | | Art Unit | |
| | Dzung D. Tran | | 2613 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 2-6 and 10-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 7 is rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. US Patent no. 6,999,653.

Regarding claim 7, Lee discloses in Figure 27, a bi-directional optical add/drop multiplexer which is connected to an optical fiber for transmitting optical signals multiplexed in a wavelength division multiplexing optical network and which performs adding/dropping of the optical signals, the bi-directional optical add/drop multiplexer comprising:

a first wavelength division multiplexer M provided with a multiplexing port providing a path for a forward or backward optical signal and with a plurality of demultiplexing ports, each providing a path of demultiplexed channels;

a plurality of add/drop parts (e.g., SW, RX, TX), each performing adding or dropping of predetermined channels, and connected with the demultiplexing ports of the first wavelength division multiplexer; and

a second wavelength division multiplexer (D) provided with a plurality of demultiplexing ports, each providing a path for demultiplexed channels and with a multiplexing port providing a path for the forward or backward optical signal, the plurality of demultiplexing ports of the second wavelength division multiplexer connected to the plurality of add/drop parts.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. US Patent no. 6,999,653 in view of Doerr US Publication no. 2002/0122440.

Regarding claims 1, 8 and 9, Lee discloses in Figure 27, a bi-directional optical add/drop multiplexer which is connected to an optical fiber for transmitting optical signals multiplexed in a wavelength division multiplexing optical network and which performs adding/dropping of the optical signals, the bi-directional optical add/drop multiplexer comprising:

a first wavelength division multiplexer (M) provided with a multiplexing port providing a path for a forward or backward optical signal and with a plurality of demultiplexing ports, each providing a path for demultiplexed channels;

a plurality of add/drop parts (e.g., SW, RX, TX), each performing adding or dropping of predetermined channels, and connected with the demultiplexing ports of the first wavelength division multiplexer (see Figure 27; Col. 10, lines 13-29); and

a second wavelength division multiplexer (D) provided with a plurality of demultiplexing ports, each providing a path for demultiplexed channels and with a multiplexing port providing a path for the forward or backward optical signal, the plurality of demultiplexing ports of the second wavelength division multiplexer connected to the plurality of add/drop parts (see Figure 27; Col. 10, lines 13-29).

Lee does not specifically disclose wherein the first wavelength division multiplexer has a free spectral range equal to that of the second wavelength division multiplexer, in which a wavelength band of the forward optical signals is included in the free spectral range having one period, while a wavelength band of the backward optical signals is included in the free spectral range having another period.

Doerr discloses the wavelength division multiplexer/demultiplexer have the same free spectral range (FSR) (see abstract, page 1, paragraph 0005).

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to include the teaching of Doerr in the apparatus of Lee that is having the first wavelength division multiplexer has a free spectral range equal to that of the second wavelength division multiplexer. One of ordinary skill in the art would

have been motivated to do that in order to the same set of wavelength in the first and second multiplexer. Thus, the wavelength compatibility is assured.

Furthermore, whether to have the pass wavelength band of the of the forward optical signals is included in the free spectral range having one period, while a wavelength band of the backward optical signals is included in the free spectral range having another period is merely an engineering design choices (e.g., Lee discloses the multiplexer M and D transmits the C group forward optical signals and D group backward optical signals).

Claims 2-6 and 10-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Orbach et al. U.S. Patent no. 7,024,116. Optical Add/Drop multiplexer
 - b. Grasso et al. U.S. Patent no. 6,288,810. Device for adding and dropping optical signals
 - c. Duerksen et al. U.S. Patent no. 6,438,286. Protection switching in bidirectional WDM optical communication networks

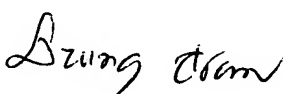
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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran
09/26/2006


DZUNG TRAN
PRIMARY PATENT EXAMINER